

Abstract of the Invention

A method and system for registering a CAD layout to a Focused Ion Beam image for through-the substrate probing, without using an optical image and without requiring biasing, includes an improved method of trench endpointing during the FIB milling operation with a low beam energy. The method further includes removal of Ga at the trench floor using  $\text{XeF}_2$ , as well as the deposition of an insulating layer onto the trench floor.